




# Proposed GAN Projects for TTF and for other Sites

An approach to find criteria for local and  
remote Projects from DESY's point of view



# WG 1 Charges

- Discuss the 'GAN common sense' for projects
  - Identify (GAN) projects
    - Existing projects
      - White spots (new developments)
      - Grey spots (welcome to help)
      - Green spots ( welcome to join)
    - New projects
      - Help to form new (GAN) interest groups
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# New (GAN) Interest Groups

Group charges in the order of complexity:

1. Identify areas of common interest
  2. Help to find partners and form groups
  3. Initiate projects
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# Possible Projects at TTF (I)

## The White Spots:

New developments are necessary

### ☛ Data Acquisition System

- Bunch by bunch Archiving of all machine data
- Offline analysis tools

### ☛ Integration of Web services into the control system

- Web access (read) to control data
- Access to configuration data
- Access to the TTF documentation (EDMS)

# Possible Projects at TTF (II)

## The Grey Spots:

New developments already in preparation which need support

### ■ New hardware for LLRF under construction

- Final specification might need external support
- Software specification not yet started
  - Simulation procedures
- Test/ simulate new LLRF modules with external partners
- Commissioning of the new system in simulation mode and in situ
  - Correlation of HF data with machine data using the (new) DAQ system

# Possible Projects at TTF (III)

## The Green Spots:


New developments nearly finished. External partners are welcome to join.

### ☛ Magnet Power supplies

- New GAN-aware design
  - Modular
  - More diagnostic features
- Data access through the control systems's channels and additional/ independent Web access



# Limitations for new Projects at TTF

- ☛ TTF is not a ,white spot' any more
    - Schedule for the next years is already defined
    - TTF will merge into a user facility over the next years
    - No major changes in the control system's architecture are possible
    - Nearly all functions for TTF operations are covered
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# Lessons we might learn with other sites

- General GAN aspects
  - Collaborative work
- Technical aspects
  - Hardware
  - Software
- Long term operations

There is no commitment that we might be able to work actively in all these areas. But there is potential interest in several aspects.





## General GAN aspects

- Test, Commissioning and operation of components delivered from different partners which remain responsible for their equipment throughout the whole lifecycle.

(typical for a GAN installation)



# Hardware

Far remote Commissioning and operation of hardware components.

- Analysis of error conditions
- Missing diagnostic features
- Change management (i.e. new firmware)

-> WG-3?

# Software

## ■ Data access methods

- X-Windows
- Direct (raw) data

## ● Compare

- Required bandwidth
- Necessary security

## ● Advantages / disadvantages

- Remote development of X-Windows applications
- Change management for applications built on direct data access

## ● (Raw) Data update methods

- RPC-type polling / publish subscribe



# Long term operations

- Change management of hardware and software in an existing installation performed by remote collaboration members
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